



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Group Art Unit 3611

In re

Patent Application of

Dane J. Hoechst, et al.

Application No. 09/901,479

Confirmation No. 5170

Filed: July 9, 2001

Examiner: Daniel J. Yeagley

"MOTORCYCLE HAVING STATIONARY BELT  
TENSIONER"

I, Susan L. Buckingham, hereby certify that this correspondence is being deposited with the US Postal Service as first class mail in an envelope addressed to Commissioner For Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on the date of my signature.

*Susan L. Buckingham*  
Signature

*Sept. 16, 2004*  
Date of Signature

**DECLARATION OF DANE J. HOECHST UNDER 37 C.F.R. §1.132**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

I, Dane J. Hoechst, declare as follows:

1. I am a Design Engineer at Buell Motorcycle Company, which is the owner of the above-referenced patent application ("Application").
2. I am currently involved in the design and manufacture of motorcycles and related components.
3. I understand that, in an Office action dated May 19, 2004, Examiner Daniel Yeagley rejected claims 1-4, 6, 8-10, 12, 14, and 15 of the Application under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 5,857,538 ("Chambers") in view of United States Patent No. 4,735,277 ("Prince").
4. I further understand that Examiner Yeagley identifies in the Office action that Chambers fails to disclose a "tensioner being fixed to at least one of a frame and engine transmission assembly against both pivotal and translational movement with respect to the output shaft . . .," but also identifies that Prince shows a "tensioner . . .

fixed to at least one of a frame [and engine transmission assembly] . . . such that the tensioner is . . . coupled to the frame against both pivotal and translational movement with respect to the output shaft of the engine/transmission assembly . . . .”

5. Prince illustrates a chain tensioner in Fig. 4 and describes the chain tensioner in column 3, lines 46-48 as follows: “An idler arm 1100 is mounted on shaft 1104 and has idler roller 1102 fixed thereon for controlling the tension in the chain 930.”

6. As a person skilled in the motorcycle art, it is my belief and understanding that the chain tensioner illustrated in Fig. 4 of Prince (“the “Tensioner”) is not fixed against both pivotal and translational movement with respect to the output shaft. Rather, I believe that the Tensioner is pivotable and spring-biased similar to those known and commonly used in the art to bias the chain to remove slack from the slack side of the chain during movement of the swingarm. Further, I believe that the Tensioner could not be fixed against both pivotal and translational movement with respect to the output shaft because the Tensioner is not adequately mounted to the frame to withstand the forces generated by the chain during operation of the motorcycle.

A chain applies extreme forces to the contact end of a fixed tensioner during the operation of a motorcycle, and specifically, during the act of significant braking or downshifting. The forces experienced at the contact end are transferred to the opposite end of the fixed tensioner through a moment arm defined between the contact and connected ends. These forces acting through the moment arm are significantly greater than the chain forces applied to the contact end thereby requiring a strong and robust connection between the connected end and the frame to withstand these greater moment forces. In particular, the connection between the connected end and the frame must include multiple connection points to withstand the tendency of the fixed tensioner to rotate in response to the moment forces.

In light of this, the Tensioner could not be fixed against both pivotal and translational movement with respect to the output shaft to maintain a substantially constant belt path length during movement of the swingarm because the Tensioner is mounted to the frame at a single point of connection. Specifically, the connected end of the Tensioner is connected to the frame by a single fastener (i.e., shaft 1104) which is grossly inadequate to prevent the tensioner from pivoting relative to the fastener under

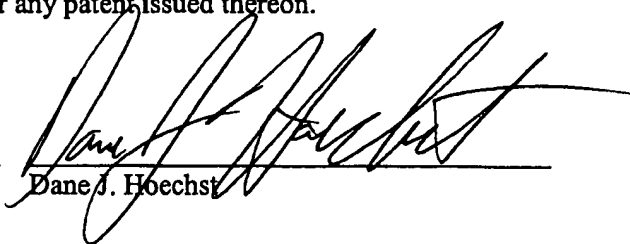
the moment forces. For this reason, one skilled in the motorcycle art would interpret the Tensioner as being pivotable and biased.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date

9/15/04

Dane J. Hoechst



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